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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,878	12/08/2003	Robin Peng	3051-6244US	6708
24247	7590	09/06/2005	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ELLIS, SUEZU Y	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/731,878

Applicant(s)

PENG ET AL.

Examiner

Suezu Ellis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 26 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **RESPONSE TO AMENDMENT**

### ***Response to Arguments***

Applicant's arguments filed July 26, 2005 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is confusing. Claim language in lines 1 and 2 recite the phrase "detecting the switching motion is effected only if the switching motion is effected within a predetermined distance" which is confusing. Further it "the switching motion is effected" is recited twice. This seems redundant. For ease of understanding, please clarify or reword.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 15 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Walthall et al. (US 4,305,006). Hereinafter, Walthall et al. will be referred to as Walthall.

With respect to claim 1 and 23, Walthall discloses a hands-free electrical switch (on-off switch) comprising an electronic switching element (on-off circuitry) and a motion detection element configured to sense a substantially linear switching motion that causes the electronic switching element to switch between a first state (off) and a second state (on) (col. 1, lines 60-64).

With respect to claims 2-4, Walthall discloses in Fig. 8, the motion detection element includes two emitters (D1, D1') and a detector (Q2), wherein the emitters are in vertical alignment with one another and the detector is positioned between the two emitters.

With respect to claims 6-8, Walthall discloses two visible position indicators (D4, D5) where each indicator is an LED that produces red and green colors.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walthall.

With respect to claim 5, Walthall addresses all the limitations of claim 1. Further, Walthall discloses that to trigger the on-off circuitry, the motion detection unit senses the motion preferably less than six inches (col. 9, lines 18-29). It would have been an obvious design choice to modify the distance in order to ensure that the switch will not be actuated unless a person intentionally does so.

With respect to claims 21 and 22, Walthall addresses all the limitations of claim 1, however fails to expressly disclose sensing the opposite linear switching motion (i.e. downward) to cause the electronic switching element to switch between second state (on) and the first state (off). However, a conventional light switch demonstrates the common notion of performing switching motion to switch in the opposite direction in order to turn the switch from "on" to "off". Thus it would have been obvious to a person of ordinary skill in the art to modify the switch of Walthall so that a switching motion of the opposite direction will turn off the switch, in order to conform with the convention of a regular light switch which users are already familiar with.

With respect to claim 22, the modified Walthall addresses all the limitations of claims 1 and 21. Further the modified Walthall discloses in one embodiment that an upward direction of a passing hand is able to actuate the switch circuit (col. 1, lines 56-59).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walthall in view of Lang (US 5,977,878).

With respect to claim 9, Walthall addresses all the limitations of claim 1, however, fails to expressly disclose an audio element configured to output an audible signal when the switching motion is detected. Walthall and Lang are directed to a similar field of endeavor of non-contact switches. Lang discloses the inclusion of an audible sound as an indicator of when the switch changes states (col. 4, lines 5-7). Note the change of states occurs after switching motion is detected by the detector. It would have been an obvious design choice for a person of ordinary skill in the art to include an audible signal when the switching motion is detected, as another means of an indicator, in order to let the user know when the switch has changed states.

Claims 10-13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walthall in view of Endruschat et al. (US 5,594,238). Hereinafter, Endruschat et al. will be referred to as Endruschat.

With respect to claims 10, 11 and 13, Walthall discloses in Fig. 8, an on-off switch comprising a pair of aligned emitters (D1, D1') that emit infrared radiation, a detector (Q2), located between the emitters, to detect the infrared radiation from the emitters (col. 2, lines 40-44), and an electronic switching element (on-off circuitry) (col. 1, lines 8-25). Walthall further discloses the on-off circuitry is coupled to a triac (col. 3, lines 8-15, 64-66; col. 4, lines 20-23). Walthall further discloses the switch comprising

two LED indicators that produce red and green colors (col. 3, lines 28-33). Walthall fails to expressly disclose a processor which controls the emitters and the emitters and electronic switching element are in communication with. Walthall and Endruschat are directed to a similar field of endeavor of touchless switches. Endruschat discloses a processor that controls the emitter and that interprets the presence of an object so that a toggle operation is initiated to toggle the switch (col. 4, lines 13-16, 42-44).

Endruschat fails to expressly disclose the electronic switching element, however, in order to initiate toggling of the switch, there must be an electronic switching element which is in communication with the processor. It would have been obvious to a person of ordinary skill in the art to include a processor in order to monitor the detector and control the emitters.

With respect to claim 12, the modified Walthall addresses all the limitations of claim 10. Further, the modified Walthall discloses that to trigger the on-off circuitry, the motion detection unit senses the motion preferably less than six inches (col. 9, lines 18-29). It would have been an obvious design choice to modify the distance in order to ensure that the switch will not be actuated unless a person intentionally does so.

With respect to claims 15-19, Walthall discloses the substantially linear switching motion, detecting the switching motion, timing the switching motion and determining whether the switching motion occurs in a direction corresponding to a change in the state of the electrical circuit (col. 11, lines 3-6, 12-16). Walthall further discloses detecting the switching motion within a preset distance (col. 10, lines 49-53). Walthall further discloses two visible position indicators (D4, D5) where each indicator is an LED

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that produces red and green colors (col. 3, lines 28-33). Walthall fails to expressly disclose timing the switching motion and switching the state of the electrical circuit when the switching motion occurs within a predetermined time range. Endruschat teaches determining if the switching motion occurs within a predetermined time range and switching the state of the electrical circuit of so (col. 4, line 65 – col. 5, line 9). It would have been obvious to time the switching motion and to switch the state of the electrical circuit if the switching motion occurred within a predetermined time range in order to determine if the user is inadvertently in front of the switch or if the switch should be turned on or off.

With respect to claim 16, opening and closing the electrical circuit when switching the state of the electrical circuit (“on” or “off”) is inherent to the apparatus. When turning the switch on, the electrical circuit would be closed and turning the switch off, the electrical circuit would be opened.

Claims 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walthall in view of Endruschat and further in view of Lang.

With respect to claims 14 and 20, the modified Walthall addresses all the limitations of claim 10, however, fails to expressly disclose an audio element configured to output an audible signal when the switching motion is detected. Lang discloses the inclusion of an audible sound as an indicator of when the switch changes states (col. 4, lines 5-7). Note the change of states occurs after switching motion is detected by the detector. It would have been an obvious design choice for a person of ordinary skill in



the art to include an audible signal when the switching motion is detected, as another means of an indicator, in order to let the user know when the switch has changed states.

### ***Response to Arguments***

With respect to claims 1 and 10, applicant argues Walthall fails to describe a switch that is configured to sense a switching motion before changing a state of the electronic switching element. Walthall discloses in col. 1, lines 60-64, the on-off circuitry is actuated by passing the hand close to and in front of the light sources and detector *in a given direction*. Walthall further gives examples of the given direction being either upward or downward directions (col. 1, lines 52-59). Thus the detector senses the substantially linear switching motion (the given direction of the hand passing).

The claims not addressed in the Response to Arguments are rejected on the basis of the rejections above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Telephone/Fax Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-5pm (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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